



OFFICE MEMORANDUM

DATE: January 17, 2003

TO: Region Engineers
Region Delivery Engineers
TSC Managers
Resident/Project Engineers
Region Construction Engineers

FROM: Larry E. Tibbits
Chief Operations Officer

John C. Friend
Engineer of Delivery

SUBJECT: Bureau of Highway Instructional Memorandum 2003-01
Procedures for Submitting Top Course Hot Mix Asphalt (HMA) Mix
Design Aggregates for Aggregate Wear Index (AWI) Determination

Procedure for Sources Without a Nomograph or Circular Wear Track AWI Value

If the aggregate source does not have an established AWI Nomograph and is a natural gravel, a sample must be submitted for AWI determination at least five working days prior to the submission of the bituminous mix design.

Each component aggregate that retains 5 percent or more (by weight) of material on the No. 4 sieve must be submitted for an AWI value. Sample these component aggregates in accordance with MTM 107-01. Reduce these component aggregate samples in accordance with ASTM C 702-98 to a sample size no smaller than 2500 grams. Sieve each component aggregate in accordance with MTM 109-01 using the No. 4, 3/8 in., 1/2 in., and 3/4 in. sieves. Count, label and bag each size fraction. If the particle count on any one sieve exceeds 300 pieces, reduce the particles retained on that sieve to approximately 300 particles in accordance with ASTM C 702-98. The aggregate submitted must be completely washed and dried. This may occur at any time after reduction.

Each component aggregate for both Marshall and Superpave mixes must be submitted with a completed Form 1923 (Sample Identification). Each component aggregate for a Marshall mix must be submitted with a completed Form 1820 (Contractor's Bituminous Mix Design Communications). Each component aggregate for a Superpave mix must be submitted with a completed Form 1855 (Contractor's Superpave Bituminous Mix Design Communication).

Contact the Lansing Aggregate Quality Control with the Construction and Technology Support Area for instructions when the aggregate source originates from a quarry, trap rock, waste mine rock, or slag operation and does not have an established Circular Wear Track AWI value.

Procedure for Sources With a Nomograph or Circular Wear Track Value

If the aggregate source has an established Nomograph or Circular Wear Track AWI value, use the AWI numbers from the Nomograph or list exclusively. AWI samples must be submitted with the bituminous mix design prepared as stated above. These samples will be used to update the established Nomograph and verify the aggregate source. Under no circumstances will an individual AWI value be used to replace an established Nomograph.

Rejection of Submitted Aggregate Sample

If the procedures stated in this instructional memorandum are not followed, the submitted aggregate sample may be rejected. If it is determined that an aggregate sample must be rejected, the Aggregate Quality Control Group will immediately contact the submitting agent and request that another sample be submitted. Rejection of an aggregate sample may cause delay in the approval of the mix design.

Location of Nomograph and Circular Wear Track AWI Values

The most current Nomograph and Circular Wear Track AWI values are posted on the department's web site. The exact location is listed below:

<http://www.mdot.state.mi.us/mappub/materialsguide/bitmixnomographs/index.cfm>

Contact Aggregate Quality Control or the Bituminous Mix Design Engineer at 517-322-1087 if there are any questions about these procedures.

This instructional memorandum will be incorporated into the next revision of the Procedures Manual for Mix Design Processing.

Chief Operations Officer

Engineer of Delivery

BOHD:C/T:AR:kab

Subject Index: Bituminous

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